J Clin Aesthet Dermatol. 2021;14(10):16.

MEDICAL PHOTOGRAPHY IN THE AGE OF SMARTPHONE CAMERAS

Dear Editor:

Immortalizing disease images, first by moulages and later by photography, has been a critical part of dermatology since before we were a formal specialty. At its peak in the 20th century, many departments had staff medical photographers, while others had official "department cameras" to capture a variety of skin findings.

True democratization of image capture began in the mid-2000s with inexpensive camera phones that made image capture and storage simple and inexpensive. This "dumbing down," making digital photography available worldwide, in our opinion has been associated with a loss of basic photographic principles for clinical photography, including non-distracting backgrounds, "standardized" views for reproducibility over time, and good lighting. The latter is most critical, as removal of backgrounds can be performed by apps and online services.

Lighting, from the perspective of good color reproduction by choosing an appropriate light source, and short exposure with a small aperture to give good depth of field and not have movement-related blurs, is critical to good quality images. At present, there are many LED light sources, in the shape of rings or circles, that clip onto cell phones, giving a color-balanced and consistent source of light. The ring's placement around the lens gives flat illumination, useful for images in orifices, while placement off the side of the lens allows the light to function as more of a point source allowing shadows and the perception of texture and height of lesions.

We believe images taken using a cell phone or tablet should be illuminated with a bright external light source to allow the fastest exposure with the smallest aperture (controllable with many third-party apps) and the greatest detail. These lights also minimize the amount of illumination from ambient light sources, be it the warm yellow coloration of incandescent or halogen lighting or the sickly green of fluorescent lights that are common in exam rooms, offices and hospital rooms, further enhancing the standardization of images captured.

Searching on Amazon.com for "phone camera light" brings up over 9,000 matches, with some able to function as both a ring around the lens and as a point source of light, based on placement. Some allow color temperature selection ranging from warm white (yellow tinge, 2,000–3,000K) to cool white (blue tinge, 3,100–4,500K) to daylight (4,600–6,500K). We suggest using the daylight setting to further enhance consistency. Self-contained units with either a replaceable or rechargeable battery are inexpensive and convenient enough to meet the needs of most dermatologists (who are thoughtful about their image storage security to avoid issues with HIPAA non-compliance and associated penalties).

Based on working distance and magnification, some light sources may over-illuminate and wash out features. This can be solved by lowering light intensity or diffusing light by any of a number of simple techniques to get excellent images that enhance patient care and increase the likelihood of acceptance of images for publication.

With regard,

DANIEL M. SIEGEL, MD,
and NEAL D. BHATIA, MD

AFFILIATIONS. *Dr. Siegel is a Past President of the American Academy of Dermatology (2012–2013). Dr. Bhatia is the Vice President of the American Academy of Dermatology (2021–2022).*

FUNDING. *No funding was provided for this article.*

DISCLOSURES. *The authors declare no conflicts of interest related to the content of this article.*

CORRESPONDENCE. *Neal D. Bhatia, MD; Email: dsbconsulting37@gmail.com*